



# COMPANY PROFILE

# SISONS

# ENGINEERING

# SOLUTIONS

2024


## WHO WE ARE:

SISONS Engineering Solutions is one of the rising companies of independent consultants and engineers, offering all kinds of mechanical, civil, electrical, energy generation and HVAC services to both the public and private sectors.

SISONS Engineering Solutions prides itself on having a team of professional and skilled engineers with years of experience and accolades providing expert consultation.

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**SISONS**  
ENGINEERING SOLUTIONS

# ABOUT OUR COMPANY

Welcome to SISONS Engineering Solutions, your partner in engineering innovation and solutions. With a relentless commitment to excellence and a passion for innovation, we are a leading engineering consultancy and services provider dedicated to transforming ideas into reality.

At SISONS, our vision is to be the driving force behind technological advancements, shaping industries and societies through innovative engineering solutions. We strive to be the go-to partner for clients seeking cutting-edge expertise and comprehensive services across various engineering domains.

SISONS follows the philosophy of rendering distinguished services that are creative, technologically current, and responsive to the client's needs. We are one of the rising companies of independent consultancies and engineers, offering all kinds of technical, scientific, engineering, and HVAC services to both the public and private sectors.

SISONS prides itself on having a team of professional and skilled engineers with years of experience and accolades. Our diverse talents come together to create a dynamic environment that fosters creativity and innovation. With a deep understanding of industry trends and emerging technologies, we deliver solutions that push the boundaries of what's possible.

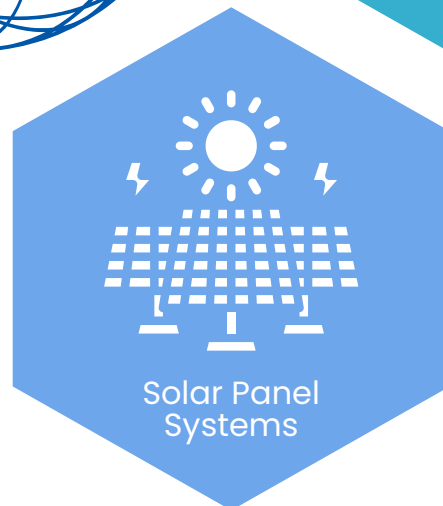
At SISONS, we're not just about engineering; we're about crafting a better future. Join us on this journey of innovation, excellence, and engineering prowess as we shape industries, communities, and the world at large. Together, let's unleash the power of engineering and make the extraordinary happen.

Welcome to the future of engineering. Welcome to SISONS Engineering Solutions.



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# INDUSTRIES WE SERVE



# OUR SERVICES

## SOLAR POWER INSTALLATION SERVICES

Solar power services are at the forefront of the renewable energy revolution. This encompasses the design, installation, and maintenance of solar energy systems, harnessing the power of the sun to generate clean and sustainable electricity. Our professionals assess energy needs, site suitability, and system design, tailoring solutions for homes, businesses, and industries. Through precise installation and ongoing monitoring, we ensure optimal system performance, reduced carbon footprint, and potential cost savings over time. Solar power plays a vital role in accelerating the transition to a greener and more energy-independent future.

## MECHANICAL ENGINEERING SERVICES

Mechanical engineering services involve designing, analyzing, and optimizing mechanical systems and components. This includes product design, simulations, testing, material selection, and efficiency enhancement. These services are crucial across industries like manufacturing, automotive, aerospace, and more, ensuring functional and reliable mechanical solutions.

## CIVIL ENGINEERING & BUILDING CONTROL

Civil engineering and building control services are the cornerstone of modern urban development. We are responsible for conceiving, designing, and supervising the construction of infrastructure projects like roads, bridges, and buildings. We harness technical expertise to ensure these structures are safe, efficient, and sustainable. Building control services, on the other hand, focus on regulating construction activities, enforcing codes, and inspecting projects to ensure they meet safety and quality standards. Together, these services ensure the growth of our cities is well-planned, secure, and aligned with the needs of both present and future generations.

## ELECTRICAL & NETWORK ENGINEERING SERVICES

Electrical and network engineering services are the backbone of our increasingly connected world. These services encompass the design, installation, and maintenance of critical electrical systems and intricate network infrastructures. Skilled professionals in this field ensure seamless power distribution, safe electrical installations, and efficient data transmission across a myriad of industries. Whether it's enhancing communication networks or implementing smart grid solutions, electrical and network engineering services drive innovation, reliability, and accessibility in today's digital age.

## ENGINEERING & ENERGY CONSULTANCY

Engineering and energy consultancy plays a pivotal role in shaping a sustainable and efficient future. By merging cutting-edge engineering expertise with insightful energy strategies, we offer essential guidance to industries and communities alike. Through meticulous analysis, innovative design, and precise implementation, we help optimize energy usage, reduce environmental impact, and enhance overall operational efficiency. Whether it's in renewable energy adoption, infrastructure development, or energy-efficient systems, engineering and energy consultancy serves as a guiding light towards a greener and more technologically advanced world.

# SOLAR POWER INSTALLATION SERVICES

## ON GRID SYSTEM

An on grid solar system, also referred to as a grid-tied solar system, is a renewable energy solution that is connected to the electrical grid. This system is ideal for individuals who do not want to add batteries as a backup option and prefer to rely on grid electricity when solar panels are not generating energy, particularly during nighttime. One of the advantages of an on grid solar system is its cost-effectiveness, as it eliminates the need for expensive solar batteries as an energy backup option.

## OFF GRID SYSTEM

An off-grid solar system permits electricity to be harnessed by solar panels and stored inside a battery without direct connection to the utility grid, providing an independent power supply to your home or business. Off-grid is functioning electrically without any connection to a mainline power supply.

## HYBRID/COMBINATION SYSTEM

A hybrid system is when your solar panels remain connected to the grid's power lines and have a backup battery system to store excess power. The sun's energy absorbed by the solar panels goes through an inverter to create usable electricity. From there, electricity either goes to your home, to your battery, or to the grid.

## REHABILITATION & UPGRADATION OF SYSTEM

Rehabilitation is a set of interventions designed to optimize functioning and reduce disability in systems in faulty conditions in interaction with their environment. Upgradation of the system is the process of raising it to a higher valued system e.g., increased production of solar energy.

## MAINTENANCE & CLEANING SERVICES OF SYSTEM

Solar panel maintenance includes cleaning the glass and periodically inspecting wires to be sure they aren't exposed or deteriorating. Our cleaning involves the complete washing of the panels to remove dust and debris for a greater efficiency of energy production.

## COMPLETE TECHNICAL DESIGN AND CONSTRUCTION OF STRUCTURE

All roof or ground installed solar panel systems often need a technical structure to achieve the yield of energy production intended. We design and construct your structure according to your needs combined with our expertise to make the impossible possible.

# MECHANICAL ENGINEERING SERVICES

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## HEATING, VENTILATION & AIR CONDITIONING (HVAC)

Installation, Commissioning maintenance and repairs of air conditioning, refrigeration, cold rooms and ventilation systems.

## SPECIALIZED FABRICATION & TREATMENT

Erection, maintenance and repair of exhaust stocks, tanks, reactors, separators, filters, scrubbers, dehydrators, evaporators, piping, furnaces, grit blasting and painting, hot and cold insulation, flare system, bearing and welding.

## HEAT RECOVERY SYSTEM

Installation, commissioning maintenance and repair of boiler plant, heat exchangers, absorption chillers, unfired pressure vessels and hot water systems, etc.

## CHILLER FOR POWER GENERATION

Installation, maintenance and repair of gas turbine driven chiller, steam turbine driven chiller and centrifugal chiller.

## SPECIALIZED PLANT

Erection, maintenance and repair of compressor station, metering station, onshore terminal station, co-generation plant, gas processing plant, petrochemical plant, oil refinery, aviation re-fueling and de-fueling system, petrol station, heating ventilation and air-conditioning.

## BLUEPRINTS CREATION & MODIFICATION

The design or a technical drawing that explains the overall details of the component. We communicate, understand specifications, and design the blueprint. It's a softcopy of imagining the values of the project. It can be used to understand and explain the detailed work plan with the help of design mode. Drawbacks of the design can be identified and improved instantly.



# CIVIL ENGINEERING & BUILDING CONTROL

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## GENERAL CIVIL WORKS

General civil engineering works, including earthworks, sub-soil drainage, etc.

## BUILDING CONTROL

Building renovation & conservation, along with maintenance and repair services.

## CONCRETE REPAIRS

Reinforcement of structures by way of pressure grouting, geniting, etc.

## WATER SUPPLY

Installation, maintenance and repair of oil and gas pipelines.

## RECLAMATION WORKS AND WATERPROOFING GENERAL BUILDINGS AND MAINTENANCE

Reclamation works. Water proofing of basement, roofs and walls. All types of repair/maintenance of civil engineering works. Construction related civil engineering works including allied electrical and mechanical works.

## BLUEPRINTS CREATION & MODIFICATION

The design or a technical drawing that explains the overall details of the component. We communicate, understand specifications, and design the blueprint. It's a softcopy of imagining the values of the project. It can be used to understand and explain the detailed work plan with the help of design mode. Drawbacks of the design can be identified and improved instantly.

# ELECTRICAL & NETWORK ENGINEERING SERVICES

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## LOW VOLTAGE INSTALLATION

General wiring and control system wiring work. Maintenance of generating plant and equipment not exceeding 1 KV.

## HIGH VOLTAGE INSTALLATION

Erection, maintenance and repair of compressor station, metering station, onshore terminal station, co-generation plant, gas processing plant, petrochemical plant, oil refinery, aviation re-fuelling and de-fuelling system, petrol station, heating ventilation and air-conditioning.

## NETWORK & SECURITY SYSTEMS

End to end Installation and Maintenance Services regarding all kinds of Office Networking, CCTV, and Security systems.

# ENGINEERING & ENERGY CONSULTATION

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## NEPRA TARRIF/TAX DISTRIBUTION CONSULTATION

We, at SISONS, assist companies in drafting their tariff imposition request to the relevant government authorities. The National Electric Power Regulatory Authority (NEPRA) is responsible for regulating the electricity supply in Pakistan. Companies like K-Electric have approached us for the consultation on their Operations & Management foreign and local, variable and fixed costs.

## ENERGY AUDITS

An energy audit is an inspection survey and an analysis of energy flows for energy conservation in a building. It may include a process or system to reduce the amount of energy input into the system without negatively affecting the output. In commercial and industrial real estate, an energy audit is the first step in identifying opportunities to reduce energy expense and carbon footprint.

# LIST OF SERVICES PERFORMED

| #  | Services   | Period | Site                  | Company    |
|----|--|--------|-----------------------|------------|
| 1  | Gas Turbine Filter Frame Structure House HE Matrix Replacement                   | Dec-20 | BQPS-2 (KE)           | SAF        |
| 2  | Dismantling, Installation & Overhauling of DN 1000, 1800, 2000 Butterfly Valves. | Jan-21 | BQPS-2                | K-Electric |
| 3  | Cooling Pit top Girders Replacement, Sand Blasting & High-marine Epoxy Coating   | Feb-21 | Korangi Power Complex | K-Electric |
| 4  | Structure & Piping Removal from Seawater Pits                                    | Feb-21 | Korangi Power Complex | K-Electric |
| 5  | CSW Chiller Lines internal and external Coating                                  | Feb-21 | Korangi Power Complex | K-Electric |
| 6  | MCW Lines internal and external Coating  | Mar-21 | Korangi Power Complex | K-Electric |
| 7  | Seawater Pit Screen Insertion Area Rehabilitation                                | Mar-21 | Korangi Power Complex | K-Electric |
| 8  | Blinding of Underground Seawater Return Pipelines                                | Dec-21 | Korangi Power Complex | K-Electric |
| 9  | Rehabilitation of Underground Seawater Pits                                      | Jan-22 | Korangi Power Complex | K-Electric |
| 10 | FRP Coating at Main Turbine Hall Rooftop Units # 1, 2, 5 & 6.                    | Feb-22 | BQPS-1                | K-Electric |
| 11 | Replacement of Windows with PVC Coated Chain-link Mesh                           | Mar-22 | Korangi Power Complex | K-Electric |

# LIST OF SERVICES PERFORMED

| #  | Services   | Period     | Site                    | Company      |
|----|--|------------|-------------------------|--------------|
| 12 | FRP Coating at Steam Turbine Hall Rooftop                                | Apr-22     | BQPS-2                  | K-Electric   |
| 13 | CCTV Camera System Maintenance & Repair                                  | May-22     | Clifton Head Office     | Novo Nordisk |
| 14 | Construction of GT Rotor Room  | Jun-22     | BQPS-2                  | K-Electric   |
| 15 | NEPRA Tariff Application Consultancy Operation & Maintenance (O&M) Costs | Jun/Jul-22 | BQPS-1, BQPS-2 & BQPS-3 | K-Electric   |
| 16 | Network Room Harnessing and Maintenance                                  | Oct-22     | Clifton Head Office     | Novo Nordisk |
| 17 | Main Steam Piping Support Modifications                                  | Jan-23     | BQPS-2                  | K-Electric   |
| 18 | Rehabilitation of Workshop Structure                                     | Mar-23     | Korangi Fleet Workshop  | K-Electric   |
| 19 | Solar System Inspection, Servicing & Maintenance                         | May-23     | Clifton Head Office     | Novo Nordisk |
| 20 | FRP Coating at HRSG, PEECC & Diverter Damper Rooms                       | May-23     | BQPS-2                  | K-Electric   |
| 21 | Application of Hy-grip Epoxy Coating for Waterproofin                    | Jul-23     | BQPS-1                  | K-Electric   |
| 22 | FRP Coating at Main Turbine Hall Rooftop Unit # 3 & 4.                   | Jul-23     | BQPS-1                  | K-Electric   |

# LIST OF SOLAR PROJECTS

| #  | Location   | Power(kW) | Type        | Year      |
|----|--|-----------|-------------|-----------|
| 1  | Masjid Tayabbah Block D North Nazimabad                  | 30kW      | On Grid     | 2020      |
| 2  | Children's Hospital Karachi Gulshan e Iqbal              | 30kW      | On Grid     | 2021      |
| 3  | Madarsa Block 3 Nazimabad                                | 30kW      | On Grid     | 2021      |
| 4  | 400sqyards House Block D North Nazimabad                 | 5kW       | Off Grid    | 2021      |
| 5  | 400sqyards House Block H North Nazimabad                 | 10kW      | On Grid     | 2022      |
| 6  | Nova Nordisk Solar System Rehabilitation and Maintenance | 15kW      | Maintenance | 2022-2023 |
| 7  | 500sqyards House DHA Karachi                             | 15kW      | On Grid     | 2023      |
| 8  | 400sqyards House Block F North Nazimabad                 | 15kW      | On Grid     | 2023      |
| 9  | 300sqyards House Block D North Nazimabad                 | 10kW      | On Grid     | 2023      |
| 10 | 500sqyards House KDA Scheme 1 Karachi                    | 15kW      | On Grid     | 2023      |
| 11 | 600sqyards House Block D North Nazimabad                 | 10kW      | Hybrid      | 2023      |



**SISONS**  
ENGINEERING SOLUTIONS

# CLIENTELE LIST



**SAF** International

Children's Hospital Karachi

**MaSS**  
INDUSTRIES (PVT) LTD.



**ASIA POWER THAR COAL  
COMPANY**

